COIR FIBER BAFFLE **Detail**

A Coir Fiber Baffle is a porous barrier installed in sediment dams and silt basins. The baffles reduce velocity of the runoff into the erosion control device, which facilitates the settling of sediment before being discharged offsite. The baffle consists of a coir fiber mat supported by steel T-posts that are also used for Temporary Silt Fence. Baffles help prevent short-circuiting of flows through the device to the outlet point with little or no settling time. In addition, the baffles improve sediment retention because they distribute the flow, which reduces turbulence of the runoff inside the device.

AREAS OF USE:

- Install coir fiber baffles in all outlet sediment dams, silt basins, and skimmer basins.
- Do not install baffles in areas of concentrated flow.

CONSTRUCTION SPECIFICATIONS:

- Install 3 baffles in the erosion control device at a spacing of ¼ the basin length.
- If the impoundment area of the device is less than 20 ft. in length, only two baffles need to be installed at a spacing of 1/3 the basin length.
- Install 5 ft. steel T-posts to a minimum depth of 2 ft. and maximum spacing of 4 ft.
- Attach 8-gauge wire to the top of the posts so that the coir fiber mat can be draped over it to measure a minimum of 3 ft. in height.
- Secure bottom of coir fiber mat with 12-inch staples at a maximum spacing of 12 inches.
- Install 5 ft. T-post into the side slopes of the basin to anchor the nearest vertical post.

MATERIAL SPECIFICATIONS:

- Posts, woven wire, and wire staples shall meet the requirements of Section 1605-2 of the Standard Specifications.
- The coir fiber mat shall have a minimum width of 6 ft.
- Coir Fiber Mat shall meet the following specifications:

100% coconut fiber (coir) twine woven into high strength matrix	
Thickness -	0.30 in. minimum
Tensile Strength	1348 x 626 lb/ft minimum
Elongation	34% x 38% maximum
Flexibility (mg-cm)	65030 x 29590
Flow Velocity	Observed 11 ft/sec
Weight	20 oz/SY
Size	6.6 x 164 ft (120 SY)
“C” Factor	0.002
Open Area (measured)	50%

PAYMENT:

- Installation of measure:

Coir Fiber Baffle Linear Foot

COIR FIBER BAFFLE **Detail**

MAINTENANCE:

- Inspect baffles on a regular basis and after each significant rainfall event and make any repairs immediately.
- Inspect coir fiber baffle to be sure the ends of the mat are anchored into the ground or side slopes with staples.
- Remove sediment from the device when it reaches ½ the baffle height, and do not damage the baffles during sediment cleanout.
- Remove and replace deteriorated or clogged baffles.
- Install additional posts or wire backing if baffle is sagging.

TYPICAL PROBLEMS:

- Improper installation (ends of mat not keyed-in properly resulting in coir fiber mat floating on top of pool in device).
- Failure due to installation across streams, ditches, waterways, and other areas which receive concentrated flow.
- Excessive silt accumulations.
- Knocked down or cut by fallen trees, rocks, equipment, excess water flows, or for work access.
- Inadequate access to maintain and remove baffle.
- Becoming clogged-up with silt particles.